Ontario

Ministry of Northern Development and Mines

Mines and Minerals Division

ONTARIO GEOLOGICAL SURVEY

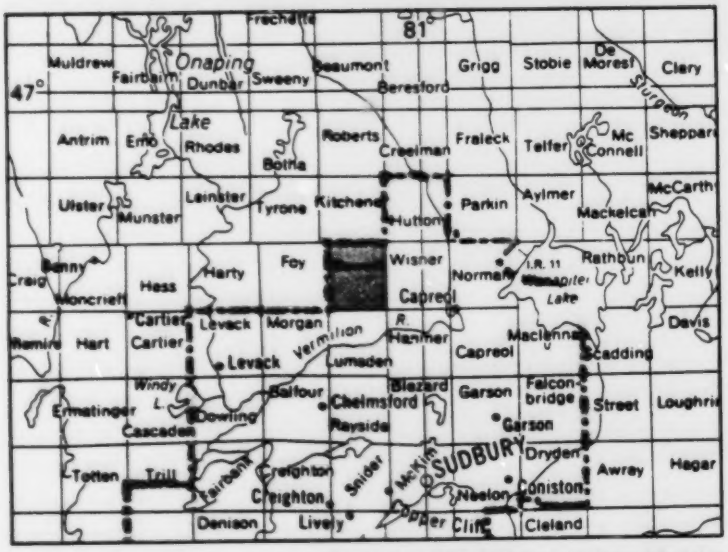
GEOLOGICAL DATA INVENTORY FOLIO

442

BOWELL TOWNSHIP

DISTRICT OF SUDBURY

Compiled by the Staff of
the Resident Geologist's Office
Sudbury



LOCATION MAP

Scale: 1:1 013 760 or 1 inch to 16 miles

89-03501/

NTS Number 41 I/14,11

Mining Claim Map Number M-676

Funding: This project is part of the Canada-Ontario Mineral Development Agreement (COMDA), which is a subsidiary agreement to the Economic and Regional Development Agreement (ERDA) signed by the governments of Canada & Ontario.

STATEMENT: This inventory is unedited. Discrepancies may occur for which the Ontario Geological Survey does not assume liability. Information from this source may be quoted if credit is given. Reference to this inventory should be made as follows:

Ontario Geological Survey

1988: Bowell Township, District of Sudbury; Ontario Geological Survey, Geological Data Inventory Folio 442, compiled by the staff of the Resident Geologist's Office in Sudbury, 21p., 2 maps.

Original Compilation by: Jerome, Lucille, September 1987

Date	Page Revised	Revised by

Date	Page Revised	Revised by

TABLE OF CONTENTS

Data Sources Checklist 1
Metals and Minerals Reference List 2
Mineral Occurrences 3
Type of Work ..... 4 - 6
Drill Hole Summary ..... 7 - 8
Airborne Geophysical Survey Data 10
Geochemical Survey Data 11
Miscellaneous Data 12
Newspaper Clipping File 13
ODM General Index Search ..... 14 - 15
Selected References ..... 16 - 19
Notes and Addenda 20
(Aerial Photographs Index)

ACCOMPANYING MAPS

Property Location Map 1
Exploration Data Map 1
Map Scale 1: 31 680 or 1 inch to ½ mile

CONVERSION FACTORS FOR MEASUREMENTS IN ONTARIO GEOLOGICAL SURVEY PUBLICATIONS

If the reader wishes to convert imperial units to SI (metric) units or SI units to imperial units the following multipliers should be used:

CONVERSION FROM SI TO IMPERIAL			CONVERSION FROM IMPERIAL TO SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
			LENGTH		
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709 7	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
			AREA		
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
			VOLUME		
1 cm^3	0.061 02	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.308 0	cubic yards	1 cubic yard	0.764 555	m^3
			CAPACITY		
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
			MASS		
1 g	0.035 273 96	ounces (avdp)	1 ounce (avdp)	**28.349 523**	g
1 g	0.032 150 75	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 62	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 908 8**	t
			CONCENTRATION		
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

1 ounce (troy)/ton (short)	20.0	pennyweights/ton (short)
1 pennyweight/ton (short)	0.05	ounce (troy)/ton (short)

One gram(g) per tonne is equivalent to one part per million (1 ppm).

NOTE–Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries published by The Mining Association of Canada in co-operation with the Coal Association of Canada.

DATA SOURCES CHECK LIST

NOTE: The following sources have been searched to compile the data for this area. If no reference data was found the appropriate box is marked 'no'; if reference data was found, the box is marked 'yes'.

All reference data found are included in the following pages. If the box is blank, the data source has not yet been searched. If the box is marked N.A., the source item is Not Applicable to this area and therefore not searched.

	SOURCES OF DATA	Data	Initial
1	Resident Geologist's Office Files	Yes	L.J.
2	Assessment Files Research Office, Toronto	N.A.	L.J.
3	ODM General Index; 9 Volumes	Yes	L.J.
4	Catalogue of Airborne Geophysical Surveys (ODM)	No	L.J.
5	ODM Mineral Resources Circulars and OGS Mineral Deposits Circulars	Yes	L.J.
6	ODM Industrial Mineral Reports	No	L.J.
7	Bibliography of Post Precambrian Theses - Karrow (ODM MP 1)	No	L.J.
8	Bibliography of Precambrian Theses - Ginn (ODM MP 2)	Yes	L.J.
9	Newspaper Clippings File	Yes	L.J.
10	GSC Index to Publications	Yes	L.J.
11	OGS Index to Published Maps and Reports - MP 77 and Supplements to MP 77	Yes	L.J.
12	OGS Index Maps	Yes	L.J.
13	Source Mineral Deposit Records (O.G.S.)	Yes	L.J.
14	Author - Subject Articles File	Yes	L.J.
15	Miscellaneous Papers: ODM & OGS	Yes	L.J.
16	ODM Geological Circulars: OGS Study Series	No	L.J.
17	ODM Preliminary Reports: ODM Bulletins	No	L.J.
18	ODM – OGS Open File Reports	Yes	L.J.
19	OGS Northern Ontario Engineering Geology Terrain Studies	Yes	L.J.
20	OGS Aggregate Resources Inventory Papers	No	L.J.
21	OGS Mineral Potential Maps	Yes	L.J.
22	Theses on File, Sudbury	Yes	L.J.
23	Aerial Photographs on File, Sudbury	Yes	L.J.

METALS AND MINERALS REFERENCES LIST

△ anh. . . . . .Anhydrite
△ ank. . . . . .Ankerite
△ anna . . . . . Annabergite
△ ap. . . . . .Apatite
△ arg . . . . . Argentite
△ As . . . . . .Arsenic
△ asp . . . . . .Arsenopyrite
△ asb . . . . . .Asbestos
△ ba. . . . . .Barite
△ be. . . . . .Beryl
△ Bi. . . . . .Bismuth
△ bn . . . . . .Bornite
△ bran . . . . . .Brannerite
△ bruc . . . . . .Brucite
△ Cd . . . . . .Cadmium
△ calc. . . . . .Calcite
△ carb . . . . . .Carbonate
△ cel . . . . . .Celestite
△ cc. . . . . .Chalcocite
△ cp. . . . . .Chalcopyrite
△ ch. . . . . .Chert
△ clay . . . . . .Clay
△ Co . . . . . .Cobalt
△ cob. . . . . Cobaltite
△ cb. . . . . .Columbite
▲ Cu . . . . . .Copper
△ cor . . . . . Corundum
△ dol . . . . . Dolomite
△ ep. . . . . Epidote
△ ery . . . . . Erythrite
△ fel . . . . . .Feldspar
△ fl . . . . . .Fluorite (flurospar)
△ fu. . . . . .Fuchsite
△ gn. . . . . Galena
△ gt. . . . . Garnet
△ goe . . . . . .Goethite
△ Au . . . . . Gold
△ gf. . . . . .Graphite
△ gl . . . . . Gravel
△ gyp. . . . . Gypsum
△ hem . . . . . Hematite
△ il . . . . . Ilmenite
△ Fe . . . . . .Iron
△ IF. . . . . Iron Formation
△ jas . . . . . Jasper
△ kaol . . . . . .Kaolinite (kaolin)
△ ky . . . . . Kyanite
▲ Pb . . . . . Lead
△ lim . . . . . Limonite
△ Li. . . . . Lithium
△ mgst . . . . . Magnesite
△ mag . . . . . Magnetite
△ mc . . . . . Malachite
△ Mn . . . . . Manganese
△ mb . . . . . Marble
△ mar. . . . . Marcasite
△ ma . . . . . .Marl
△ mi . . . . . Mica
△ ml . . . . . Millerite
△ mo . . . . . Molybdenite
△ Mo . . . . . .Molybdenum
△ mon . . . . . Monazite
△ ne. . . . . Nephelite (nepheline)
△ nc. . . . . .Niccolite
▲ Ni. . . . . Nickel
△ Nb . . . . . .Niobium
△ Pd . . . . . .Palladium
△ peat . . . . . .Peat
△ pent . . . . . .Pentlandite
△ Pt. . . . . .Platinum
△ py . . . . . .Pyrite
△ pyl . . . . . Pyrochlore
△ pyrl . . . . . .Pyrolusite
△ po . . . . . .Pyrrhotite
△ q . . . . . .Quartz
△ qcv . . . . .Quartz carbonate vein
△ ra. . . . . .Radioactive minerals
△ RE . . . . . .Rare Earths
△ sd. . . . . Sand
△ sgl . . . . . Sand and gravel
△ ss . . . . . .Sandstone
△ scap . . . . . Scapolite
△ shee . . . . . .Scheelite
△ serp . . . . . Serpentine
△ sh. . . . . .Shale
△ sid . . . . . Siderite
△ si . . . . . .Silica
△ Ag . . . . . .Silver
△ sl . . . . . Slate
△ sm . . . . . .Smaltite
△ sod. . . . . Sodalite
△ spec . . . . . Specularite
△ sp. . . . . .Sphalerite
△ spd . . . . . .Spodumene
△ staur . . . . . .Staurolite
△ stib. . . . . Stibnite
△ st . . . . . .Stone
△ talc. . . . . .Talc
△ Te . . . . . .Tellurium
△ td. . . . . Tetrahedrite
△ th. . . . . .Thorite
△ Th . . . . . .Thorium
△ thuc . . . . . Thucholite
△ ti . . . . . Titanite
△ Ti. . . . . Titanium
△ tour . . . . . .Tourmaline
△ trap . . . . . .Trap rock
△ W. . . . . Tungsten
△ uran . . . . . Uraninite
△ U . . . . . .Uranium
△ verm . . . . . .Vermiculite
△ Y . . . . . Yttrium
▲ Zn . . . . . .Zinc
△ zr. . . . . .Zircon
▲ S. . . . . .Sulphide

Solid triangles indicate metal and mineral occurrences shown on the accompanying maps.

MINERAL OCCURRENCES

Map Ref. Letter	Name(s)	Mineralization	Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
A	Beo Lake Occurrence	S			GR 65, Map 2134
B	Frappier Lake Occurrence	Ni, Cu			GR 65, Map 2134
C	Foster Lake Occurrence	Ni, Cu			GR 65, Map 2134
D	Foy Offset Property (see Note No. 1, p. 11)	S	Ni 3		
E	Nelson Lake Occurrence	Ni, Cu			GR 65, Map 2134
F	Nickel Lake Occurrence	Ni, Cu			GR 65, Map 2134
G	Roland Lake Occurrence	Ni, Cu			GR 65, Map 2134
H	Nelson Lake or Proulx or Prue Occurrence (see Note No. 2, p. 11)	Cu, Pb, Zn	Pb 3	MRC 2, p. 103 MRC 12, p. 273	O.D.M. AR Vol. 38, pt. 3, p. 49

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE SUDBURY COMPANY/AUTHOR (file number)		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
1	Inco Ltd. (Bowell 0010-A1)				50															
2	Inco Ltd. (Bowell 0010-B1)				50															
3	Inco Ltd. (Bowell 0010-B1)				50															
4	Inco Ltd. (Bowell 0010-B1)				50															
5	Inco Ltd. (Bowell 0010-B1)				50															
6	Inco Ltd. (Bowell 0010-B1)				50															
7	Inco Ltd. (Bowell 0010-B1)				50															
8	Inco Ltd. (Bowell 0010-C1)				50															
9	Inco Ltd. (Bowell 0010-D1)				50-51															
10	Inco Ltd. (Bowell 0011-A1)				62															
11	Inco Ltd. (Bowell 0011-C1)				50 51															
12	Inco Ltd. (Bowell 0011-D1)				68															
13	Inco Ltd. (Bowell 0012-A1)				68															
14	Inco Ltd. (Bowell 0011-E1)				68															
15	Inco Ltd. (Bowell 0012-B1)				68															
16	Falconbridge Nickel Mines Ltd. (Bowell 0011-B1)				50															

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE SUDBURY COMPANY/AUTHOR (file number)		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
16	Falconbridge Nickel Mines Ltd. (Bowell 0010-E1)				52															
17	Falconbridge Nickel Mines Ltd. (Bowell 0012-D1)				48															
18	Falconbridge Nickel Mines Ltd. (Bowell 0012-C1)				48															
19	Falconbridge Nickel Mines Ltd. (Bowell 0012-E1)				56 57															
20	Copper-Man Mines Ltd. (Bowell 0013-B1)											59								
21	North Range Nickel Mines Ltd. (Bowell 0014)	44										44								
22	North Range Nickel Mines Ltd. (Bowell 0014)	44										44								
23	Nickel Offsets Ltd. (Bowell 0015)	69						50 51 69												
24	Inco Ltd. (Bowell 0013-A1)											48								
25	Inco Ltd. (Bowell 0013-A1)											48								
26	Sudbury Offsets Ltd. (Bowell 0016)											37[1]								

GDIF FORM NO. 2

BOWELL TOWNSHIP

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE SUDBURY COMPANY/AUTHOR (file number)		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
27	Falconbridge Nickel Mines Ltd. (Bowell 0017)											57[1]								
28	Sudbury Nickel and Copper Co. Ltd.			28?	28															

[1] Maps only. No other data.

GDIF FORM NO. 2

DRILLHOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drillhole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
1	Inco Ltd.	7440	1950		90	14	2601		
2		7435	1950		90	27	2230		
3		7420	1950		90	16	498	S	
4		7421	1950		90	11	400		
5		7422	1950		90	18	1199	S	
6		7423	1950		90	9	685	S	
7		7424	1950		90	16	661	S	
8		7425	1950		90	23	1015		
9		7426	1950		90	132	1403	po, py, cp	
10		7473	1950		90	11	1480	po	
11		7427	1950		90	6	828	S	
12		7428	1950		90	5	613		
13		7429	1950		90	8	535		
14		7430	1950		90	7	785		
15		7431	1950		90	9	957		
16		7432	1950		90	45	800		
17		7436	1950		90	9	1800	chlorite	
18		7439	1950-51		90	25	3066	ep, py, po	
19		7449	1951		90	7	335	ep	
20		22099	1962		90	0	3607	ep	
21		7434	1950		90	12	2109	mineralization	
22		7437	1950		90	5	1801	S	
23		7438	1950		90	5	2400	ep, q	
24		9615	1951		90	5	800		
25		36955	1968		90	40	1003		
26		36954	1968		90	12	1003		
27		36951	1968		90	12	701		
28		36952	1968		90	26	703		
29		36953	1968		90	16	903		
30	Falconbridge Nickel Mines Ltd.	B-XC-1	1950		90	0	88	py, cp	
30		B-XC-2	1950		90	0	81	S	
30		B-XC-3	1950		90	0	73	py	
31		B-XC-4	1950		90	0	62	py	

GDIF FORM NO. 3

DRILLHOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drillhole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
31	Falconbridge Nickel Mines	B-XC-5	1950		90	0	70	S	
32	Ltd., cont'd	B-XC-6	1950		90	0	70	S	
32		B-XC-7	1950		90	0	70	S	
32		B-XC-8	1950		90	0	96	py	
33		B-XC-1	1952	360	40	0	325	py	
33		B-XC-2	1952	360	50	0	205		
33		B-XC-3	1952	360	55	0	260		
34		Bo-XC-1	1948	270	45	2	87		
34		Bo-XC-2	1948	270	65	1	93		
34		Bo-XC-3	1948	270	90	1	81		
34		Bo-XC-4	1948	270	55	1	60		
35		Bo-XC-5	1948	045	40	2	86	py	
35		Bo-XC-6	1948	045	60	1	45		
35		Bo-XC-7	1948	045	75	1	110		
35		Bo-XC-8	1948	180	60	1	79		
36		Bo-XC-11	1948	270	40	1	43		
36		Bo-XC-12	1948	315	50	1	33		
36		Bo-XC-13	1948	315	90	1	70		
36		Bo-XC-14	1948	315	82	1	54		
37		B-XC-1	1957	?	65	0	350		
37		B-XC-2	1957	200	80	0	435		
37		B-XC-3	1957		90	0	415		
38		B-XC-1	1956		90	0	350		
38		B-XC-2	1956		90	0	450		
39	Sudbury Nickel and Copper Co. Ltd.		1928	6 drill	holes - no other information				

Bowell Township

DRILLHOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drillhole Number	Date Drilled	Bearing Azimuth	Initial Dip of Hole	Thickness of Overburden	Total Length of Hole	Mineralization Noted in Log	Assay Data Included for

GDIF FORM NO. 3

10 BOWELL TOWNSHIP

AIRBORNE GEOPHYSICAL SURVEY DATA

No.	By For	Type of Survey	Flight Altitude	Flight Line Direction	Flight Line Spacing

GDIF FORM NO. 4

BOWELL TOWNSHIP

Map Sample Site Reference Number	GEOCHEMICAL SURVEY DATA		By	Reference
	Type of Survey	Analysis For		

GDIF FORM NO. 5

MISCELLANEOUS DATA

AGE DATING

Site	Method	Material	Reference	Result

Note No. 1: Foy Offset Property

In 1934, Falconbridge Nickel Mines Ltd. acquired a group of 9 patented mining claims in Bowell Township.

Several showings of pyrrhotite and chalcopyrite occur on the property and work was done on the showings prior to Falconbridge's acquisition. In 1928, Sudbury Nickel and Copper Co. Ltd. put down 6 drill holes in the area of claims WD35 and WD36. Trenching was also performed on the property by unknown parties prior to 1928. No other information is available on the work done prior to 1934.

Note No. 2:

Prior to 1905 a small shaft was sunk in the southeast corner of Bowell Tp. by Mr. Prue. Copper, lead and zinc mineralization are said to show up in the shaft.

NEWSPAPER CLIPPINGS FILE

NOTE: A file of newspaper clippings about the companies listed below, who have worked in this area, is maintained in the Regional/Resident Geologist's Office.

Nickel Offsets Ltd.

Northern Miner	May, 1981
	October 21, 1969
	March 28, 1968
	March 18, 1968

GDIF FORM NO. 7

ODM GENERAL INDEX SEARCH

Words searched:

BEO LAKE
BOWELL TOWNSHIP
COPPER-MAN MINES LTD.
FALCONBRIDGE NICKEL MINES LTD.
FOSTER LAKE
FOY OFFSET
FRAPPIER LAKE
INCO LTD.
LAMOTHE LAKE
NELSON LAKE
NICKEL LAKE
NICKEL OFFSETS LTD.

Index Volume	Listing:	Report Volume	Part	Page
1	Bowell Tp., Sud.			
	Geology	13	1	200
	Lead-zinc mining	25	2	17
	Rocks	12		274
	conglomerate	14	3	39, 94
	greenstone	1		75
	nickel-eruptive	12		211, 276
		13	1	199
		14	3	68-70
	off-set deposits	14	3	63, 114
	petrography	14	3	129, 130
	tuff, analysis	14	3	132
1	Nickel Lake, Bowell Tp.			
	Ore deposits	12		275
	Rocks near, gossan	14	3	70
1	Prue Nickel Mine, Trout Lake			
	Bowell Tp.			
	Minerals	14	3	95
		25	2	17
	zinc blende	14	3	121
	Rocks	13	1	201, 213
		14	3	71
1	Roland Lake, Bowell Tp.			
	Rocks	13	1	200
		14	3	70
2	Bowell Tp., Sud.			
	Iron formation, exploratory work	I.O.		207
	Nickel ore, exploratory work	N.C.		R53,207
3	Bowell Tp., Sud.			
	Rhyolite	38	3	22
3	Proulx Galena Claim, Bowell Tp.			
	Mineralization	38	3	38, 49
	Ore, photo	38	3	50
3	Sudbury Offsets Ltd.			
	Capital; officers; operations	38	1	166
		39	1	147
	Incorporated	38	1	56

GDIF FORM NO. 8

ODM GENERAL INDEX SEARCH

Words searched:

NORTH RANGE NICKEL MINES LTD.
PROULX OCCURRENCE
PRUE MINE
RAND LAKE
ROLAND LAKE
SUDBURY BASIN MINES LTD.
SUDBURY NICKEL & COPPER CO. LTD.
SUDBURY OFFSETS LTD.
TROUT LAKE

Index Volume	Listing:	Report Volume	Part	Page
3	Trout Lake, Bowell Tp.			
	Mineral deposits	38	3	49
	Photo	38	3	5
	Tuff near	38	3	11
4	North Range Nickel Mines Ltd.			
	Incorporated	53	1	46
4	Sudbury Offsets Ltd.			
	Assets acquired by Nickel Offsets Ltd.	51	1	228
8	Bowell-Leinster Area, Sudbury Dist.			
	Geology of the area			
	Report & maps 2132, 2133 & 2134 on, 1969 by K. D. Card & H. D. Meyn	GR65		
	Iron	GR65		36, 38
	Lead/zinc	GR65		36
	Nickel/copper	GR65		34-36,37
	Sand/gravel	GR65		38
9	Bowell Tp., Sudbury Dist.			
	Geology (quaternary) of the Sudbury Basin area	GR181		
	Sand & gravel	GR181		43
9	Nelson Lake			
	Bowell Tp., Sudbury Dist.	GR181		22,25,27, 39

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		REGIONAL GEOLOGICAL COMPILATION MAPS		
Card, K. D.	1966-67	Sudbury Mining Area	O.D.M. Map 2170	1" = 1 mile
	1965, 67	Cartier Sheet	O.D.M. Map P.287	1" = 2 miles
Card, K. D., Lumbers, S. B.	1974, 75	Sudbury-Cobalt Geological Compilation (revised)	O.G.S. Map 2361	1" = 4 miles
Card, K. D., Meyn, H. D.	1965	Bowell Township	P.316	1" = ½ mile
	1969	Kitchener and Bowell Townships	Map 2134	1" = ½ mile
Dressler, B. O.	1984	Sudbury Geological Compilation	O.G.S. Map 2491	1:50,000
	1983	Sudbury Mining Area, East Part	O.G.S. Map P.2603	1:50,000
		Sudbury Mining Area, West Part	O.G.S. Map P.2602	1:50,000
Muir, T. L., Rebic, Z. and Dressler, B. O.	1980	Capreol Area, West Part	Map P.2377	1" = ½ mile
Muir, T. L., Taylor, A. B.	1981	Geology of the Morgan Lake - Nelson Lake Area	P.2419	1" = ½ mile
		GEOPHYSICAL MAPS		
G.S.C. - O.D.M.	1965	Aeromagnetic Map - Chelmsford	1518G	1" = 1 mile
		Aeromagnetic Map - Venetian Lake	1519G	1" = 1 mile
Gupta, V. K.	1981	Bouguer Gravity and Generalized Map of the Sudbury - Onaping Lake Area	O.G.S. Map P.2482	1:100,000
O.D.M. - G.S.C.	1965	Aeromagnetic Map - Sudbury Sheet	7067G	1" = 4 mile
	1976	Uranium Reconnaissance Program Airborne Gamma Ray Spectrometer Survey, Sudbury	Map P.1610	1:250,000

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		SURFICIAL, PLEISTOCENE, TERRAIN ENGINEERING		
Burwasser, G. J.	1972	Quaternary Geology and Industrial Mineral Resources of the Sudbury Area (West Part)	Map P.751	1:50,000
E.M.R.	1975	Topographic Map - Chelmsford		1:50,000
		Topographic Map - Venetian Lake		1:50,000
Gartner, J. F.	1980	N.O.E.G.T.S. Data Base Map, Cartier N.O.E.G.T. Study 94, Cartier Area	Map 5000	1:100,000
		N.O.E.G.T.S. General Construction Capability Map, Cartier	Map 5004	1:100,000
Sado, E. V. and Carswell, B. F.	1987	Surficial Geology of Northern Ontario	O.G.S. Map 2518	1:1,200,000
		MINERAL POTENTIAL MAPS		
Springer, J.	1977	Ontario Mineral Potential, Northern Part of Sudbury Sheet and Part of North Bay Sheet	O.G.S. Map P.1512	1:250,000
Innes, D. G., Jost, M.	1977	Nickel Deposits of Ontario East Central Sheet	P.1062	1" = 16 miles
		GEOCHEMICAL MAPS		
		No data available as of September 22, 1987		
		GEOLOGICAL REPORTS AND MAPS		
Adlington, R.	1982	Bowell Township - Sudbury Data Series	Map P.2473	1" = ¼ mile

GDIF FORM NO.9

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
Burwasser, G. J.	1979	Quaternary Geology of the Sudbury Basin Area	GR181 Map 2397	1:50,000
Bussolaro, N., Rousell, D. H., Beswick, A.	1984	Mineralization in the Onaping Formation, Sudbury Basin, Ontario. Project 4A	G.S.C. OFR 1090	
Card, K. D. and Hutchinson, R. W.	1972	The Sudbury Structure: Its Regional Geological Setting	G.A.C. Special Paper 10	pp. 67-78
Card, K. D. and Meyn, H. D.	1969	Geology of the Leinster-Bowell Area	GR65	
Muir, T. L.	1983	Geology of the Morgan Lake-Nelson Lake Area	OFR 5426	
Peredery, W. V.	1972	Chemistry of Fluidal Glasses and Melt Bodies in the Onaping Formation, Sudbury, Ontario	G.A.C. Special Paper 10	pp. 49-59
Shklanka, R., editor	1969	Copper, Nickel, Lead and Zinc Deposits of Ontario	MRC 12	
Stevenson, J. S.	1972	The Onaping Ash-Flow Sheet, Sudbury, Ontario	G.A.C. Special Paper 10	
Thomson, J. E., et al	1957	Copper, Nickel, Lead and Zinc Deposits in Ontario	MRC 2	
		JOURNALS, ARTICLES, THESES, TECHNICAL REPORTS		
Atwood, W. W. Jr.	1927	Physical Features of the Sudbury Basin; M.S., Clark University	MP 2	
Chute, N. E.	1938	The Upper Contact of the Sudbury Nickel Intrusive; Ph. D., Harvard University	MP 2	
Desborough, G. A. and Larson, R. R.	1970	Nickel-Bearing Iron Sulfides in the Onaping Formation, Sudbury Basin, Ontario	Econ. Geol. Vol. 65	pp. 728-730

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
Fullagar, P. D. et al	1971	Rb-Sr Study of Shock-Metamorphosed Inclusions from the Onaping Formation, Sudbury, Ontario	C.J.E.S. Vol. 8	pp. 435-443
Hewins, R. H.	1971	The Petrology of some Marginal Rocks Along the North Range of the Sudbury Irruptive	Sudbury Theses File	
Peredery, W. V.	1972	The Origin of the Rocks at the Base of the Onaping Formation	Sudbury Theses File	
Rousell, D. H.	1975	The Origin of Foliation and Lineation in the Onaping Formation and the Deformation of the Sudbury Basin	C.J.E.S. Vol. 12	pp. 1379-1395
	1980	Kink Bands in the Onaping Formation; Sudbury Basin, Ontario	Tectonophysics Vol. 66	pp. 83-97

GDIF FORM NO.9

NOTES AND ADDENDA

AERIAL PHOTOGRAPHS INDEX

Scale 1" = 1/4 mile

Sudbury Files

Year	Roll	Line	Number
1973	25	4633	199, 200
	25	4632	93-98
	15	4631	220-225
	14	4630	268-272
1959	6	4631	121, 125, 126
	6	4630	153, 154
	12	4629	21-27
1946	37	142	1
	37	143	40-45
	36	144	54-61
	204	145	23-30

TYPES OF DATA SHOWN ON THIS MAP

GEOCHEMICAL AND GEOCHRONOLOGICAL DATA

- Geochemical sample site, with reference number
- Area of geochemical sampling, with reference number
- Age dating material sampling site, with reference number

GEOPHYSICAL ANOMALIES

- Airborne magnetic anomaly
- Airborne electromagnetic anomaly Length of anomaly along flight line
- Airborne electromagnetic anomaly Location of anomaly along flight line
- Airborne electromagnetic anomaly Conductor axis: definite, probable, possible
- Airborne radiometric anomaly
- Ground magnetic anomaly
- Ground electromagnetic anomaly (VL - Vertical loop; HL - Horizontal loop VLF - Very low freq.; Turam; JEM - Crone Em - 16)
- Ground radiometric anomaly
- Induced polarization anomaly
- Self potential anomaly
- Audio-frequency magnetic anomaly (total intensity)
- Resistivity anomaly
- Gravity anomaly

MISCELLANEOUS DATA

- Trenching, pit
- Adit
- Rock quarry
- Sand and/or gravel pit

81°10'30"
46°47'30"
McGrindle Creek
Rand L.
Rand Cr.
McGrindle
Foster Lake
Nickel L.
Frappier Lake
Roland L.
Beo L.
Rand
Wingetsinger
River
Nelson
Ni,Cu

Ministry of Northern Development and Mines

Mines and Minerals Division

Ontario

ONTARIO GEOLOGICAL SURVEY

EXPLORATION DATA MAP

GEOLOGICAL DATA INVENTORY FOLIO 442

(Map 1 of 2)

BOWELL TOWNSHIP

DISTRICT OF SUDBURY

Scale 1:31 680

Kilometre 0.5 0 0.5 1 Kilometre

Mile 0.5 0 0.5 1 Mile

GEOLOGICAL AND MINING SYMBOLS

TYPES OF DATA SHOWN ON THIS MAP

MINERAL OCCURRENCES

- cp A. — Mineral occurrence at surface, with reference letter
- Au A. 84' — Mineral occurrence with shaft, depth given with reference letter
- Ag A. — Mineral occurrence reported but exact location uncertain, with reference letter
- cp A. — Mineralized float with reference letter
- A. — Mineral occurrence in drillhole, with reference letter, and drillhole number

DRILLHOLES

- 2 — Location of single drillhole, with reference number
- 2 — Location of closely spaced group of drillholes, with reference number
- 2 — Drillhole, exact location uncertain, with reference number

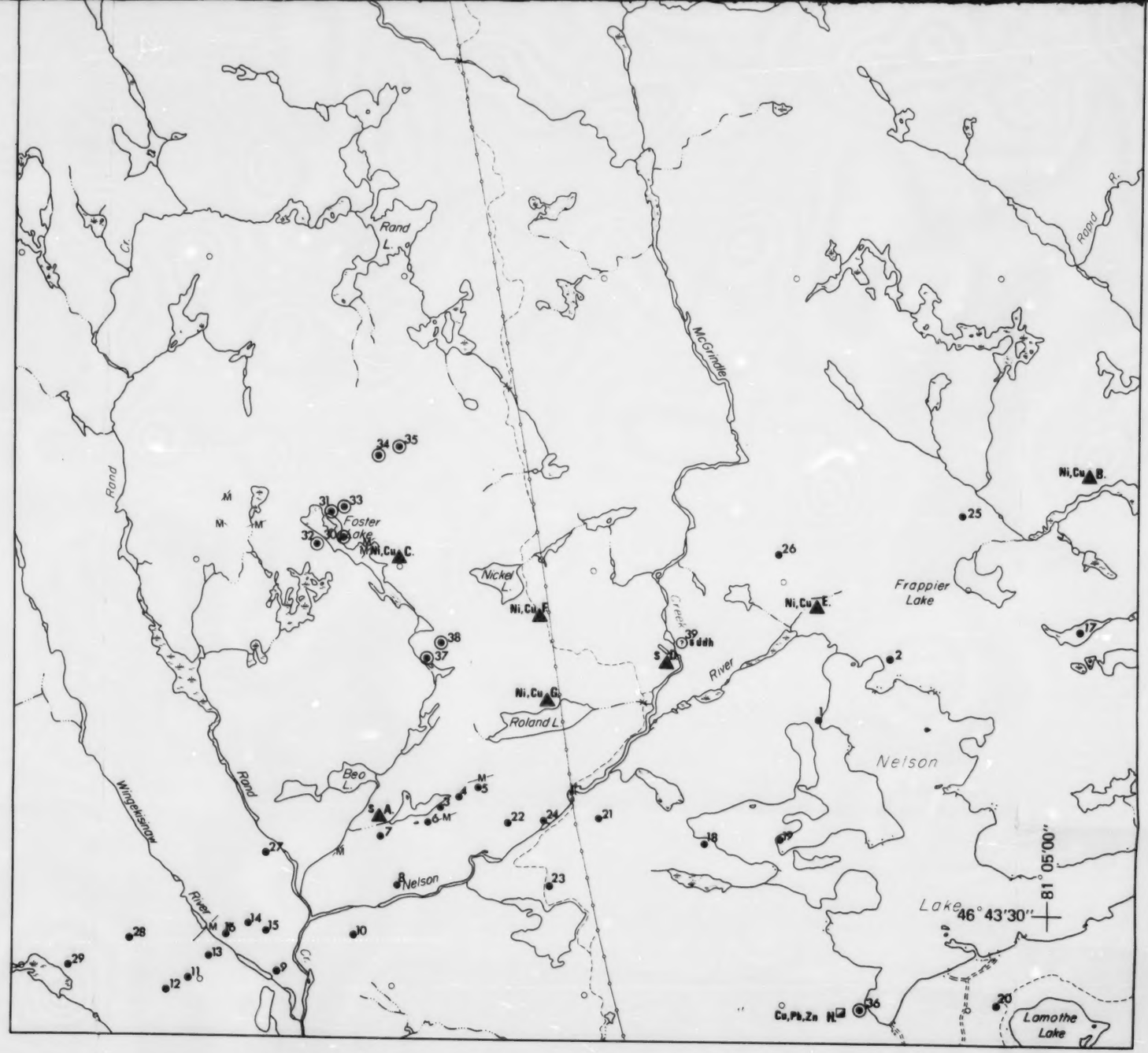
GEOPHYSICAL ANOMALIES

- ☐ AM — Airborne magnetic anomaly
- ☐ Airborne electromagnetic anomaly
  Length of anomaly along flight line
- ☐ Airborne electromagnetic anomaly
  Location of anomaly along flight line
- ☐ Airborne electromagnetic anomaly
  Conductor axis: definite, probable, possible
- ☐ ARA — Airborne radiometric anomaly
- ■ M — Ground magnetic anomaly
- ☐ VL — Ground electromagnetic anomaly
  (VL - Vertical loop; HL - Horizontal loop
  VLF - Very low freq.; Turam; JEM - Crone Em - 16)
- ☐ RA — Ground radiometric anomaly
- ☐ IP — Induced polarization anomaly
- ☐ SP — Self potential anomaly
- ☐ AFMAG — Audio-frequency magnetic anomaly
  (total intensity)
- ☐ R — Resistivity anomaly
- ☐ GR — Gravity anomaly
- ☐

MISCELLANEOUS DATA

- ■ Trenching, pit
- ☐ Adit
- ☐ Open pit
- ☐
- ☐ Rock quarry
- ☐ Sand and/or gravel pit
- ☐

NOTE: Consult the text that accompanies this map for pertinent lists of data, references, and abbreviations.



BOWELL TOWNSHIP

DISTRICT OF SUDBURY

Scale 1:31 680

Kilometre 0.5 0 0.5 1 Kilometre

Mile 0.5 0 0.5 1 Mile

GEOLOGICAL AND MINING SYMBOLS

TYPES OF DATA SHOWN ON THIS MAP

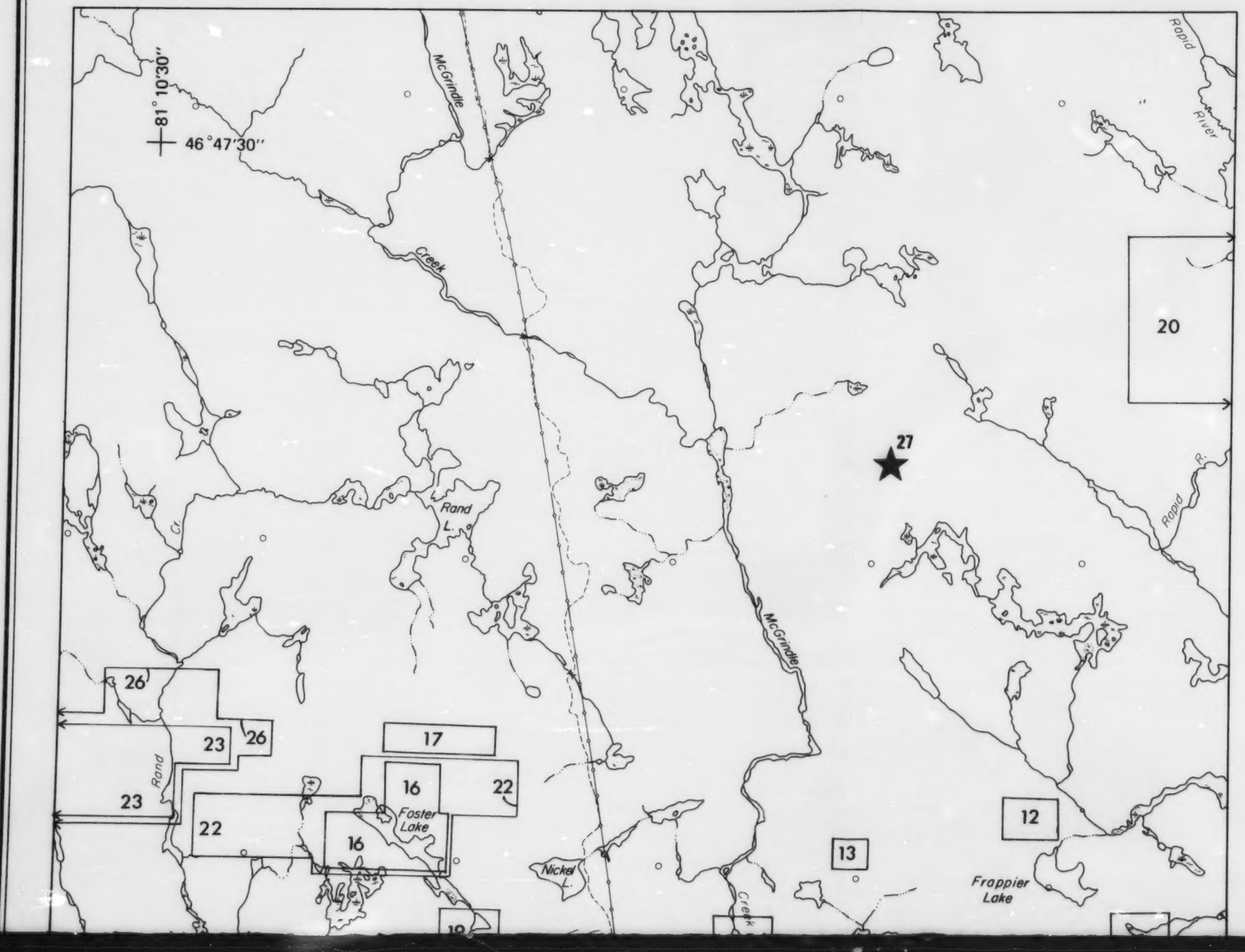
MINERAL OCCURRENCES

- cp A. — Mineral occurrence at surface, with reference letter
- Au A. 84' — Mineral occurrence with shaft, depth given with reference letter
- Ag A. — Mineral occurrence reported but exact location uncertain, with reference letter
- cp A. — Mineralized float with reference letter
- A. — Mineral occurrence in drillhole, with reference letter, and drillhole number

DRILLHOLES

- ●² — Location of single drillhole, with reference number
- ◉² — Location of closely spaced group of drillholes, with reference number
- (?)² — Drillhole, exact location uncertain, with reference number
- ◎ — Property with underground drillholes in this general area, with reference number
- ○² — Property with drillholes which have not been plotted on map, with reference number
- ⊕² — Reverse circulation drillhole; churn drilling, with reference number

Rand L.
Rand Cr.
Rapid R.
McGrindle Creek
Foster Lake
Nickel L.
Frappier Lake
Roland L.
Beo L.
Wingelsinow River
Nelson River
Nelson Lake
Lamothe Lake
81° 05'00"
46° 43'30"
Ni,Cu A.
Ni,Cu B.
Ni,Cu C.
Ni,Cu E.
Ni,Cu F.
Ni,Cu G.
Cu,Pb,Zn H.
S A.
39 6 ddh
M



Ministry of Northern Development and Mines

Mines and Minerals Division

Ontario

ONTARIO GEOLOGICAL SURVEY

PROPERTY LOCATION MAP

GEOLOGICAL DATA INVENTORY FOLIO 442

(Map 1 of 2)

BOWELL TOWNSHIP

DISTRICT OF SUDBURY

Scale 1:31 680

Kilometre 0.5 0 0.5 1 Kilometre

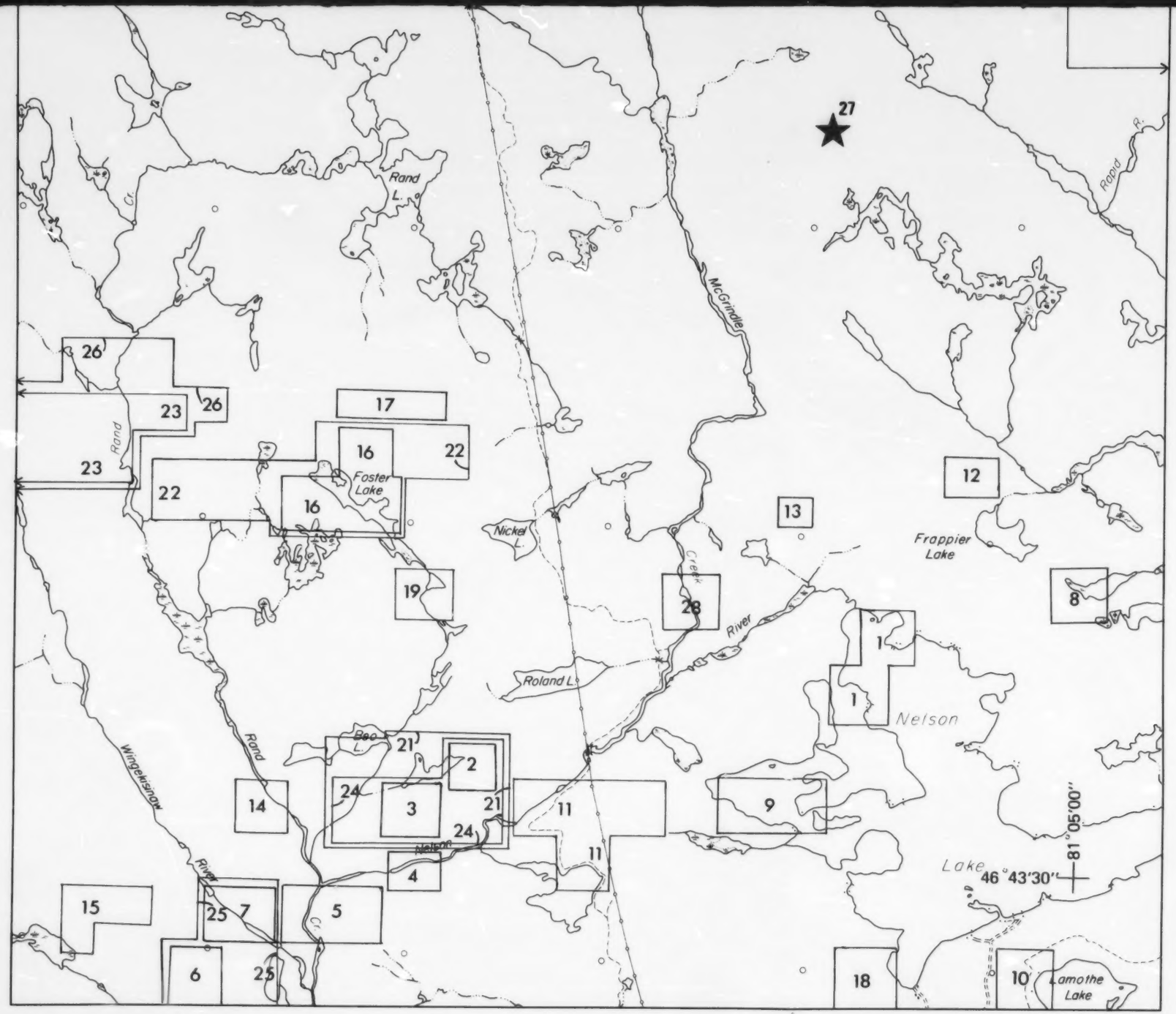
Mile 0.5 0 0.5 1 Mile

DISTRICT OF SUDBURY

Scale 1:31 680

Kilometre 0.5 0 0.5 1 Kilometre

Mile 0.5 0 0.5 1 Mile



EXPLORATION DATA FILE AREAS

- Reference number is always inside work area outlined. See listing in text pages.
- Small area of exploration
- File covers whole township or area